

212
Calculate pseudo-ranges from DTV signals

214
Determine location from pseudo-ranges

220
Provide service based on location

FIG. 2

120 110 102 Service Provider **DTV Location User Device** System Server 212 Calculate pseudoranges from DTV signals 213 213 Receive pseudo-Transmit pseudoranges ranges 214 Determine location from pseudo-ranges 215 215 Receive location Transmit location 220 Provide service based on location

FIG. 3A

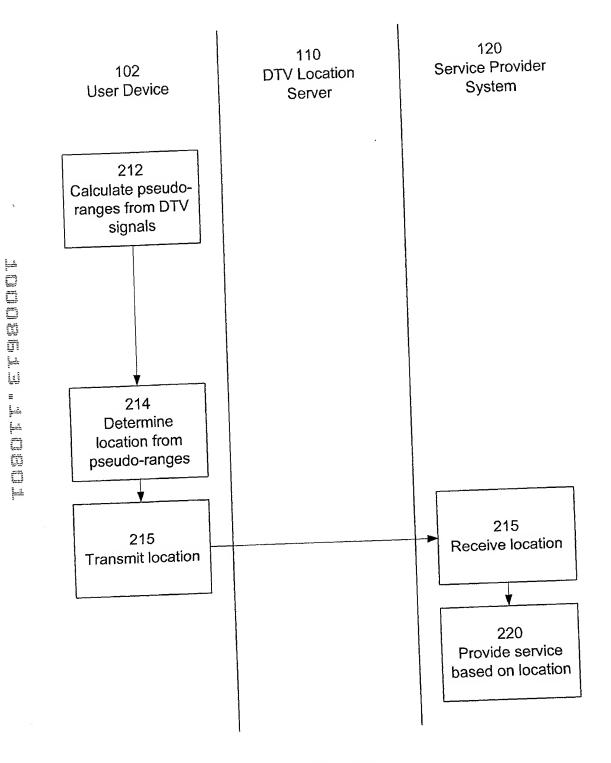


FIG. 3B

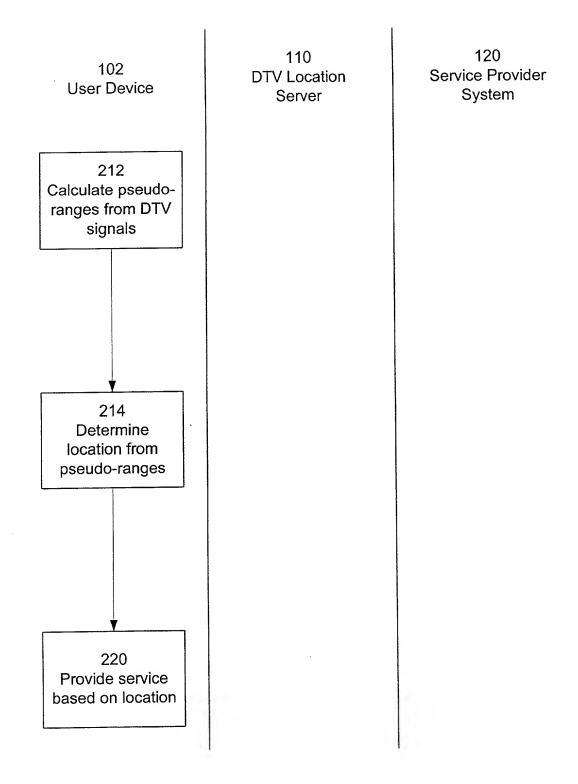
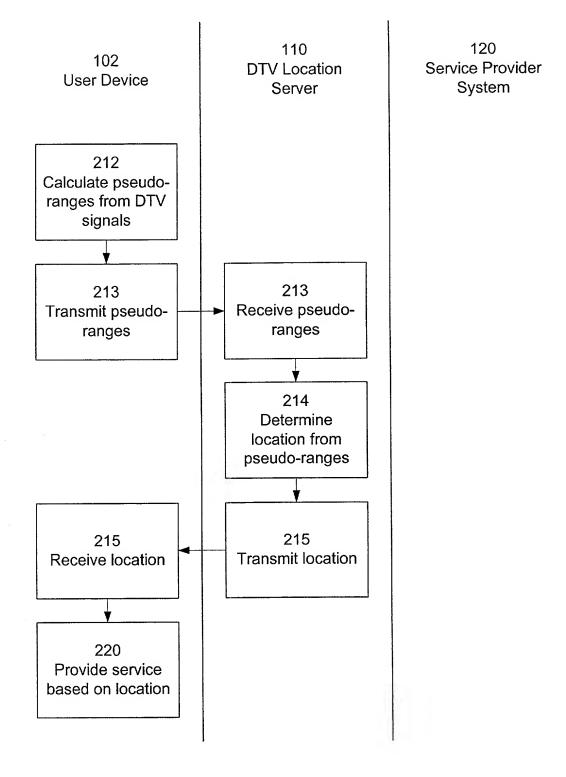


FIG. 3C



Ш

FIG. 3D

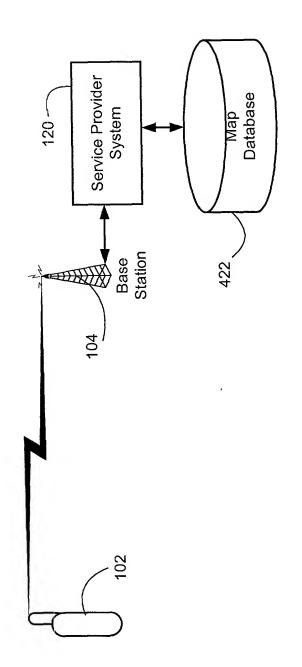
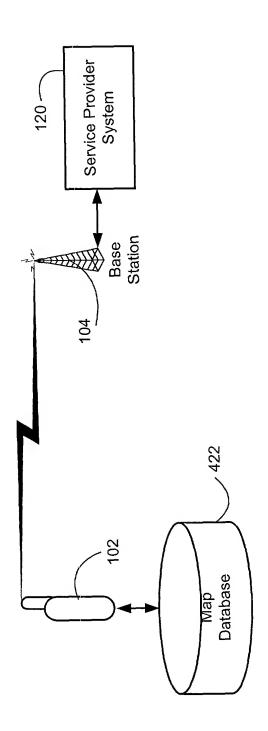
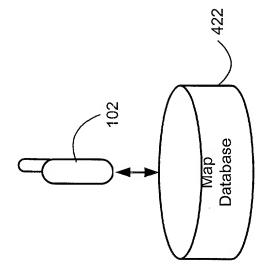
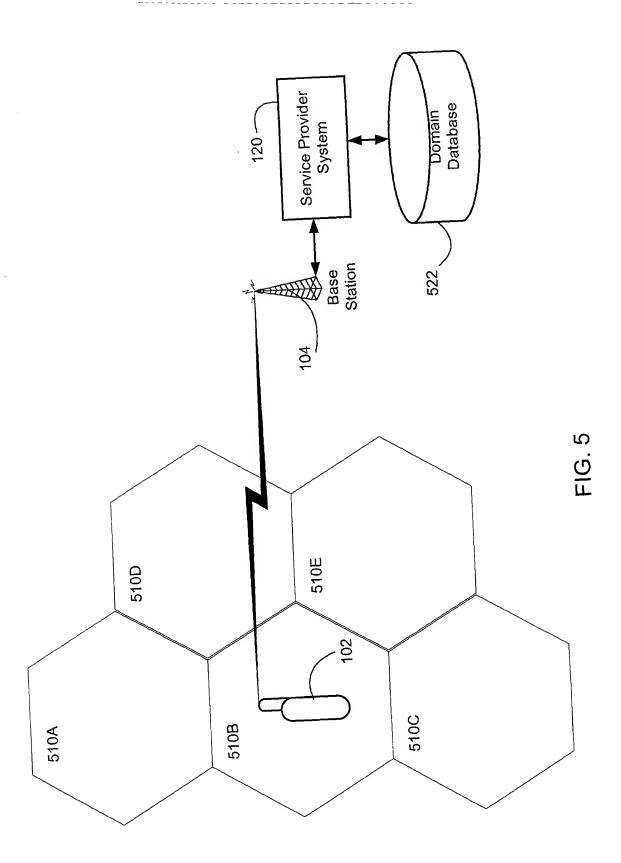


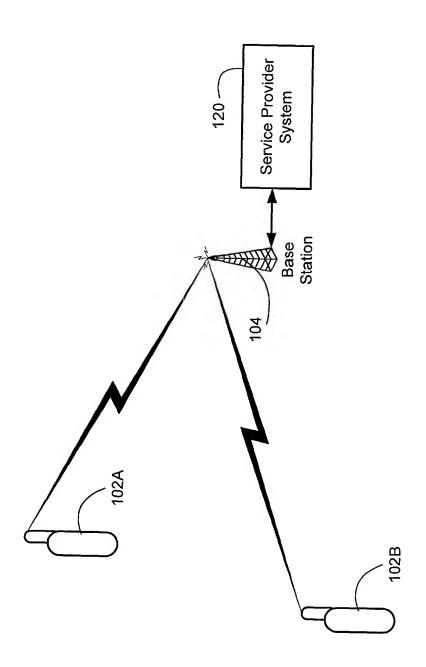
FIG. 4A



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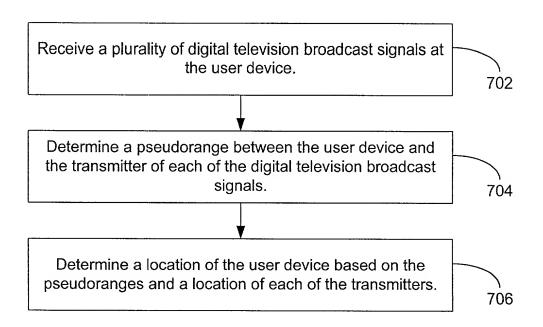


FIG. 7

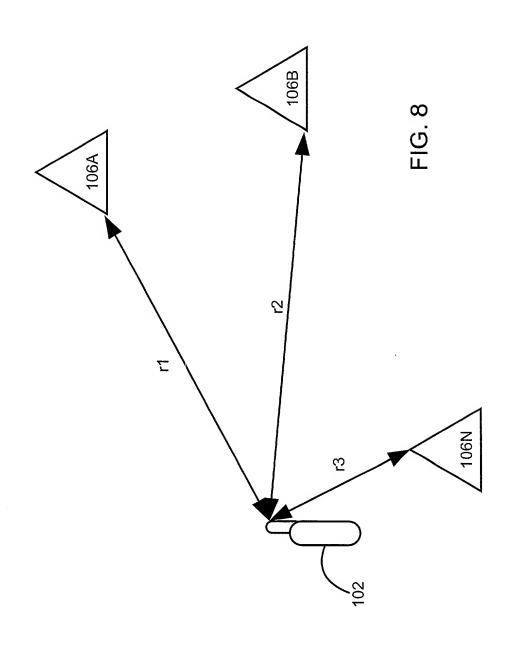
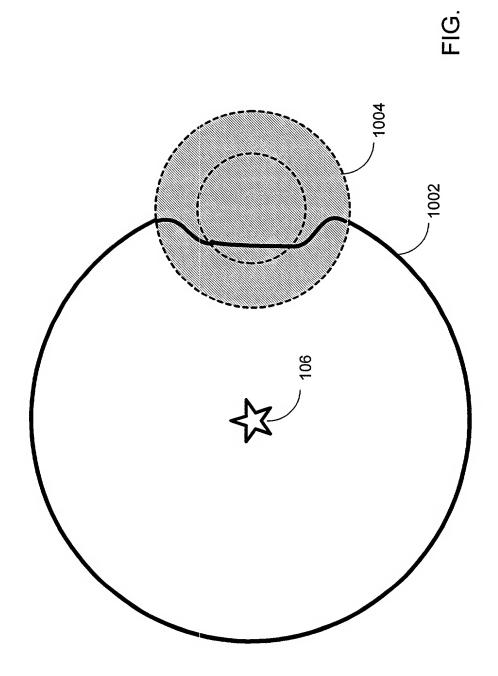
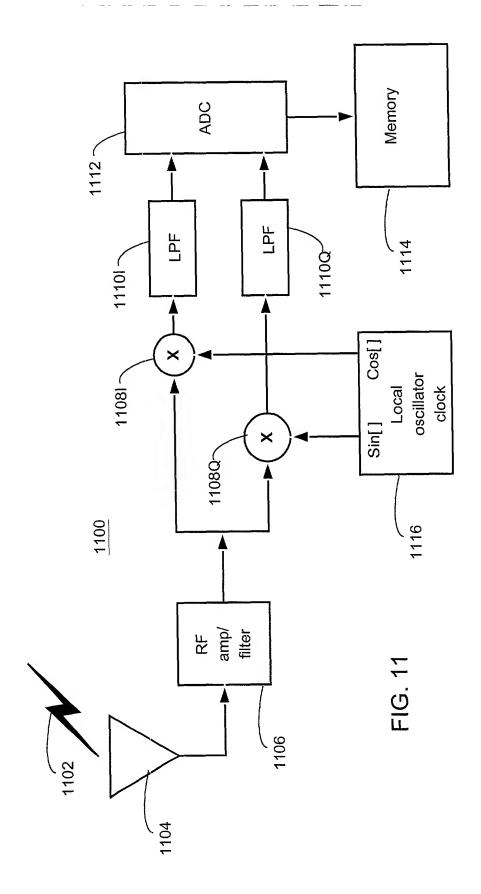
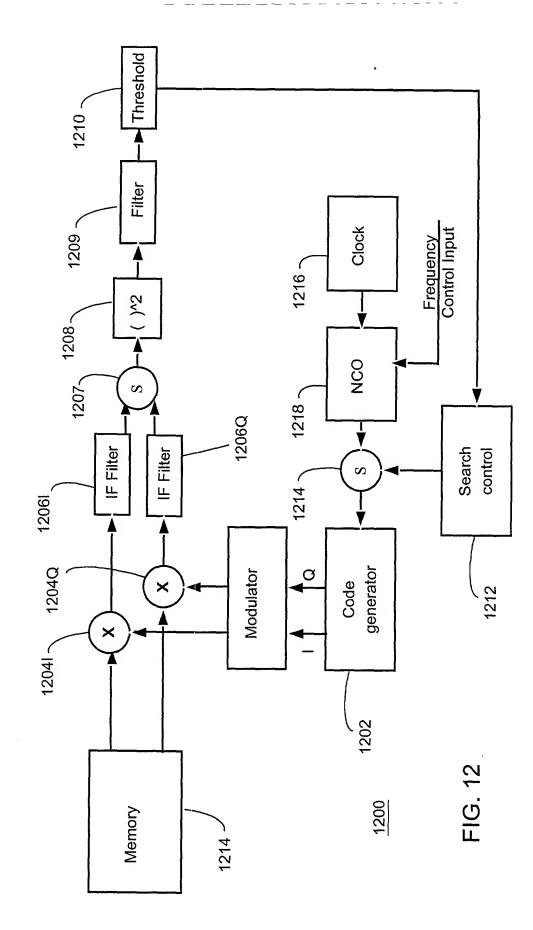


FIG. 9 .902B 102 808 106A 904A 906







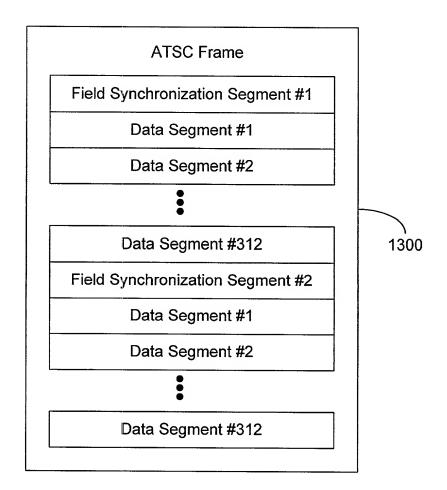


FIG. 13

Services based on position location using broadcast digital television signals; Inventors: MATTHEW D. PIERCE et al.; Docket No.: 22845-06282

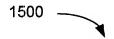
63

63

63

128

FIG. 14



511 Symbols

4 828 Symbols

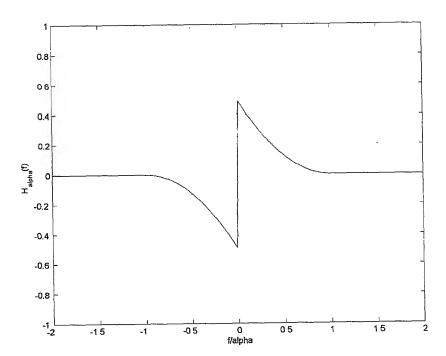
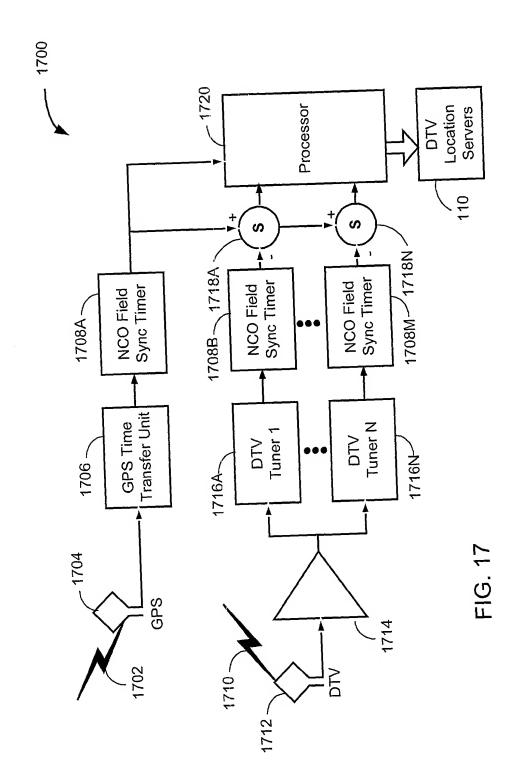
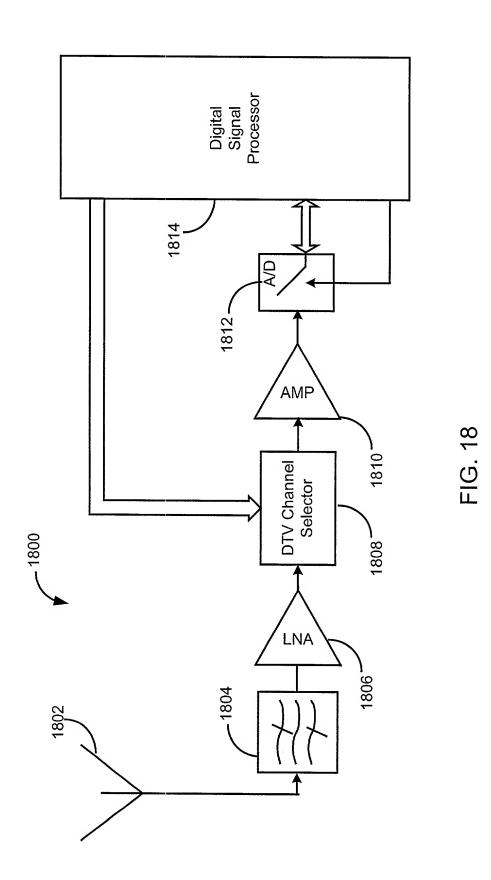


FIG. 16



loosell llosol



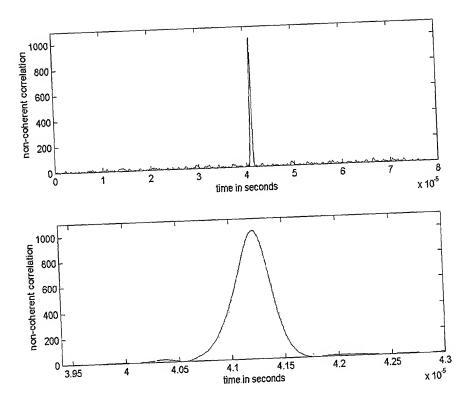


FIG. 19

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Pxx - X Power Spectral Density

100

 10^{2}

 10^{-2}

9.0

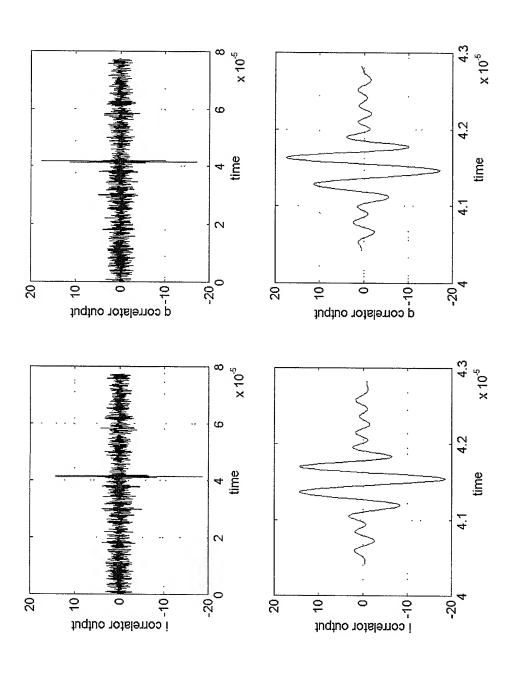
10-10

10.8

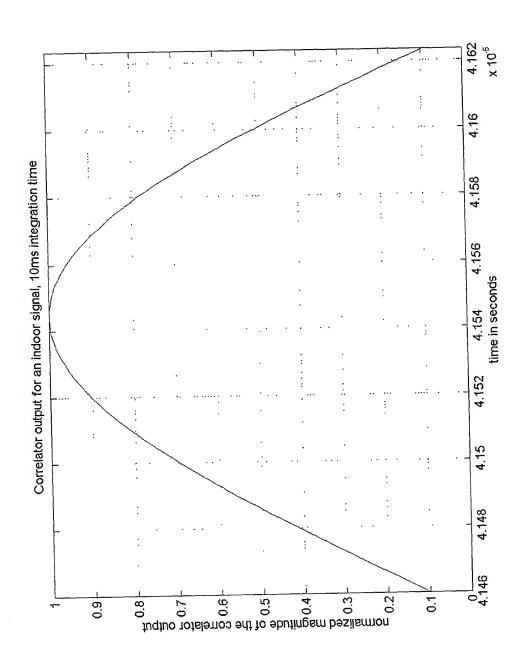
10.₆

10,4









loopesla lloedl

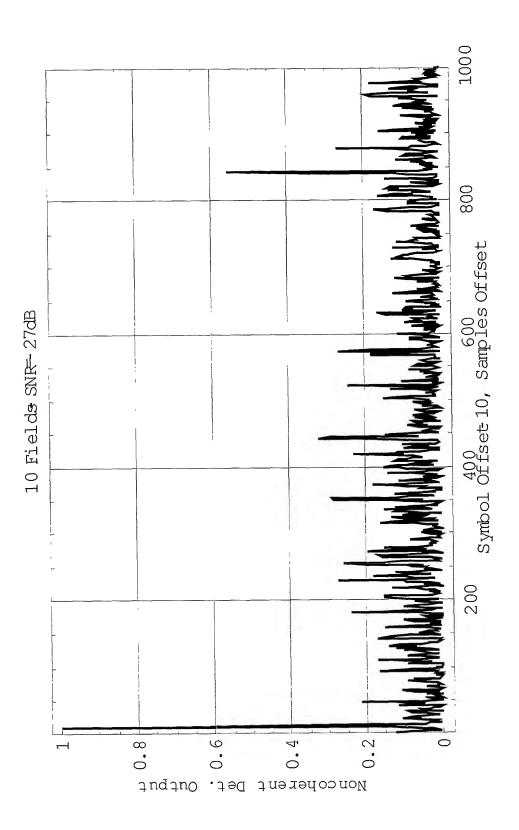
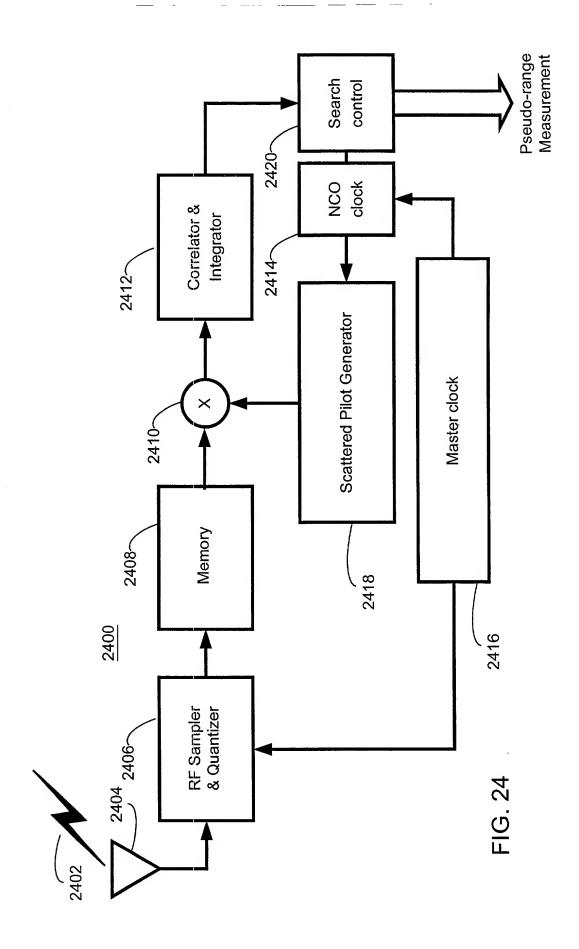


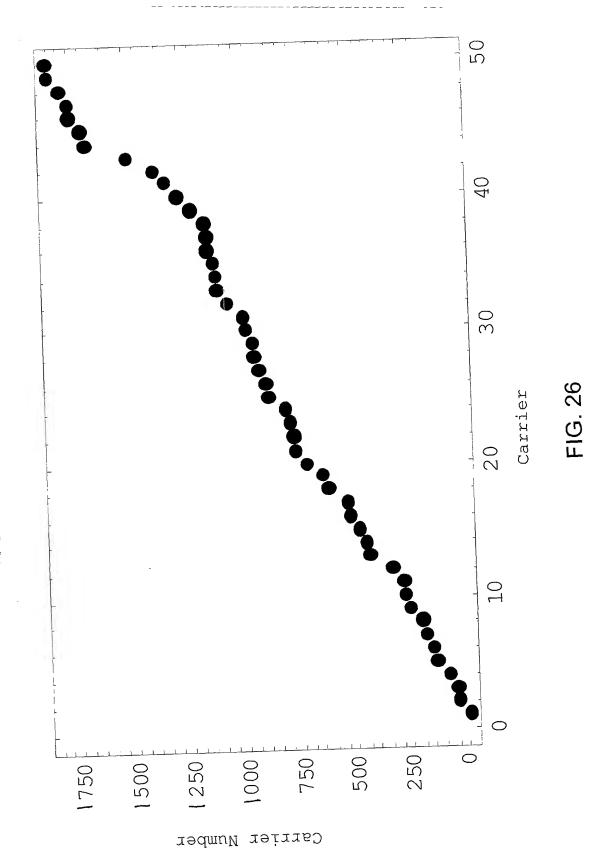
FIG. 23



14											
636, 7		1896									
618,	1137,	1850,	2463	2814	3549	4044	4509	5166	5643	9609	6916
, 531,	1110	1845	2418,	2811,	3495	4026	4458,	5160	5637,	6081	6705
3, 525	1107	1791	2340	2805	3462	3939	4392	5112	5595	5054	2003
50,48	1101	1758	2322	2754	3456	3933	1377,	5091,	5562	5051, (0013
432, 4	1050	1752	2235	2688,	3408,	3891,	4350,	4899,	5544	6030,	7 7 5 1 7
333,	, 984,	1704	2229	2673	3387	3853	4347,	4785	5445	0009	6381
3, 282,	2, 969	1683	2187	2646	3195	3840	4326	4731,	5394	5985	6318
5, 27	39,94	1491	2154	2643	3081,	3741	4296	4677,	5391,	5916	6258
201, 25	918, 9.	1377,	2136	2622	3027,	3690	4281,	4614	5367,	5892	6252
192,	888,	1323	2037,	2592,	2973	3687,	4212	4554	5313	5877,	6249
, T56,	1, 873,	1269	1986	2577,	2910	3663	4188,	4548	5304	5871,	6222
/, 141 /	0,804	1206	1983	2508	2850	3609	4173	4545	5268,	5826	6219
54, 8	65, 78	1146	1959	2484	2844,	3600	4167	4518,	5253	5748	6213
0, 48, 54, 81, 141, 156, 192, 201, 255, 279, 282, 333, 432, 450, 483, 525, 531, 618, 636, 714	759, 765, 780, 804, 873, 888, 918, 939, 942, 969, 984, 1050, 1101, 1107, 1110, 1137,	1140 1146 1206 1269 1323 1377 1491 1683 1704 1752 1758 1791, 1845 1850, 1896	1905 1959 1983 1986 2037, 2136 2154 2187, 2229 2235 2322 2340 2418 2463	2469 2484 2508 2577 2592 2622 2643 2646 2673 2688 2754 2805 2811, 2814	2841, 2844, 2850, 2910, 2973, 3027, 3081, 3195, 3387, 3408, 3456, 3462, 3495, 3549,	3564 3600 3609 3663 3687, 3690, 3741, 3840, 3853, 3891, 3933, 4026, 4044	4122 4167, 4173 4188, 4212, 4281, 4296, 4326, 4347, 4350, 4377, 4392, 4458, 4509,	4515 4518 4545 4548 4554 4614 4677, 4731, 4785 4899, 5091, 5112, 5160, 5166	5199 5253 5268 5304 5313 5367 5391, 5394 5445 5544 5562 5595 5637, 5643	5730 5748 5826 5871, 5877, 5892 5916 5985, 6000, 6030, 6051, 6054, 6081, 6096	6162 6213 6219 6222 6249 6252 6258 6318 6381 6435 6489 6603 6705 6816

FIG. 25





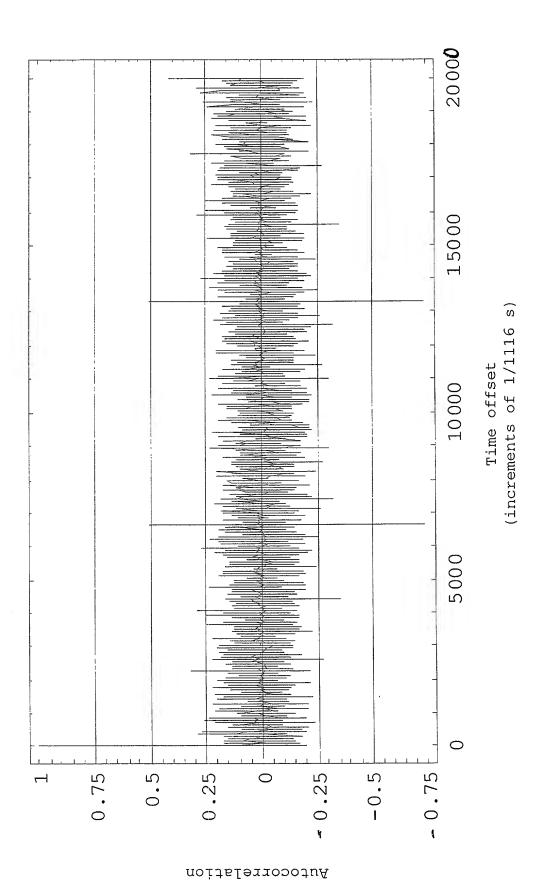
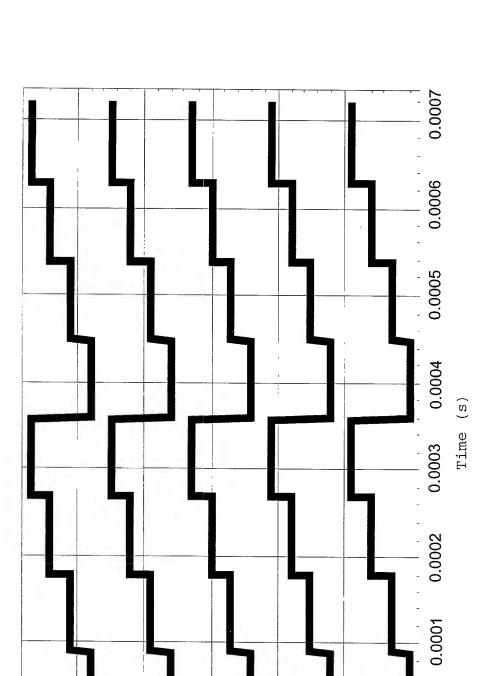


FIG. 2

Frequency/1116Hz



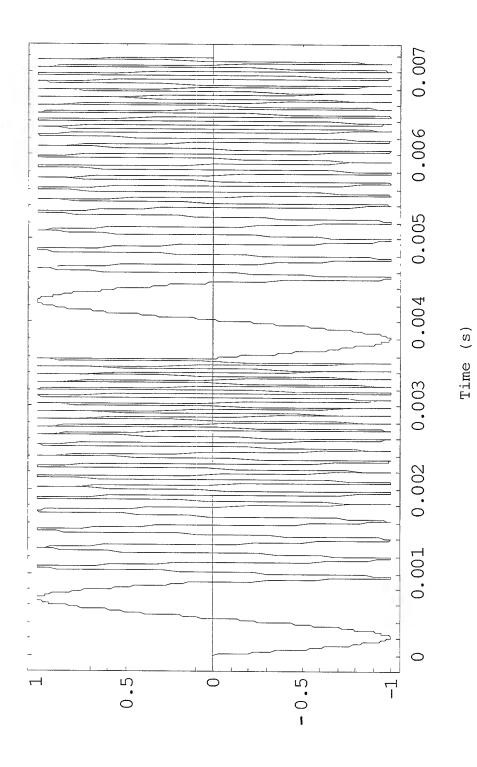
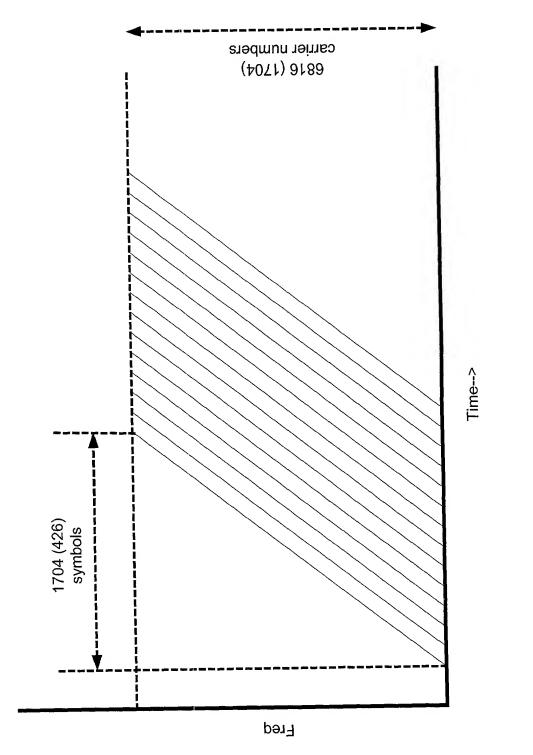


FIG. 29



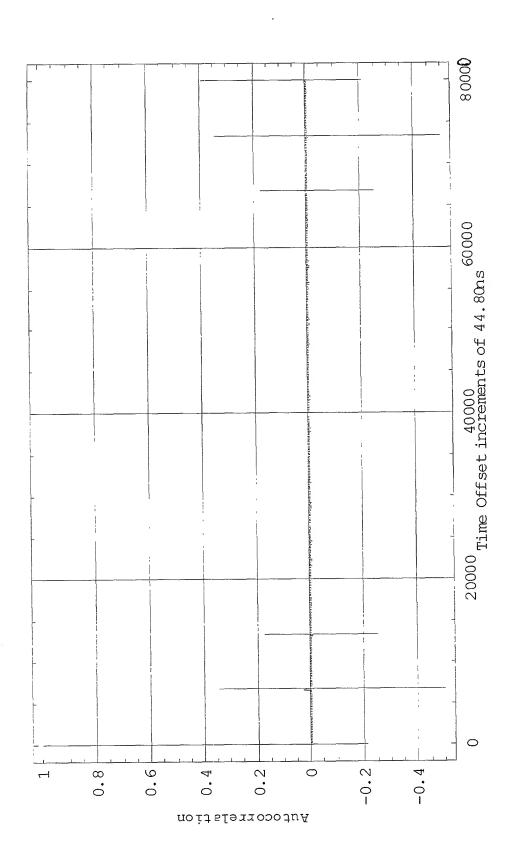


FIG. 3



